BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
Item No. 01		Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. and as per the directions of the Engineer-in-charge of the work .							
Measurements Taken On : 11/11/2019									
		New Drain							
		3rd main(RHS) Right side to 2nd							
0	14.4		Cum	1	14.40	1.10	0.90	14.26	
14.4	18.7		Cum	1	4.30	1.10	0.90	4.26	
18.7	33.7		Cum	1	15.00	1.10	0.90	14.85	
33.7	48.7		Cum	1	15.00	1.10	0.90	14.85	
48.7	63.7		Cum	1	15.00	1.10	0.90	14.85	
63.7	78.7		Cum	1	15.00	1.10	0.90	14.85	
78.7	82.9		Cum	1	4.20	1.10	0.90	4.16	
82.9	86.4		Cum	1	3.50	1.10	0.90	3.47	
86.4	92.3		Cum	1	5.90	1.10	0.90	5.84	
		3rd main (LHS)							
0	15		Cum	1	15.00	1.10	0.90	14.85	
15	30		Cum	1	15.00	1.10	0.90	14.85	
30	45		Cum	1	15.00	1.10	0.90	14.85	
45	60		Cum	1	15.00	1.10	0.90	14.85	
60	75		Cum	1	15.00	1.10	0.90	14.85	
75	81.8		Cum	1	6.80	1.10	0.90	6.73	
		3rd main (LHS) Left side to 2nd cross							
0	7.3		Cum	1	7.30	1.10	0.90	7.23	
7.3	10.3		Cum	1	3.00	1.10	0.90	2.97	
10.3	17.3		Cum	1	7.00	1.10	0.90	6.93	
17.3	20.3		Cum	1	3.00	1.10	0.90	2.97	
20.3	35		Cum	1	14.70	1.10	0.90	14.55	
35	50		Cum	1	15.00	1.10	0.90	14.85	
50	65		Cum	1	15.00	1.10	0.90	14.85	
65	78.9		Cum	1	13.90	1.10	0.90	13.76	
81	85.2			1	4.20	1.10	0.90	4.16	
		3rd main RHS							

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CIVIL Engg. Date PMC BANGALORE

Assistant Engineer

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
0	15		Cum	1	15.00	1.10	0.90	14.85	
15	30		Cum	1	15.00	1.10	0.90	14.85	
30	45		Cum	1	15.00	1.10	0.90	14.85	
45	56.7		Cum	1	11.70	1.10	0.90	11.58	
60	67.8	56.7 to 60 no Drain	Cum	1	7.80	1.10	0.90	7.72	
67.8	82.5		Cum	1	14.70	1.10	0.90	14.55	
		4th main rhs							
0	15		Cum	1	15.00	1.10	0.90	14.85	
21	23.8		Cum	1	2.80	1.10	0.90	2.77	
23.8	32.5		Cum	1	8.70	1.10	0.90	8.61	
32.5	35.8		Cum	1	3.30	1.10	0.90	3.27	
35.8	50		Cum	1	14.20	1.10	0.90	14.06	
50	57.5		Cum	1	7.50	1.10	0.90	7.43	
57.5	71.6		Cum	1	14.10	1.10	0.90	13.96	
71.6	85		Cum	1	13.40	1.10	0.90	13.27	
85	94.6		Cum	1	9.60	1.10	0.90	9.50	
		4th main lhs							
0	6.3		Cum	1	6.30	1.15	0.90	6.52	
6.3	9.2		Cum	1	2.90	1.15	0.90	3.00	
9.2	15		Cum	1	5.80	1.15	0.90	6.00	
15	24.5		Cum	1	9.50	1.15	0.90	9.83	
24.5	27.5		Cum	1	3.00	1.15	0.90	3.11	
27.5	40		Cum	1	12.50	1.15	0.90	12.94	
40	49.9		Cum	1	9.90	1.15	0.90	10.25	
49.9	56.3		Cum	1	6.40	1.15	0.90	6.62	
56.3	64.8	64.8-74.2 no drain	Cum	1	8.50	1.15	0.90	8.80	
74.2	84		Cum	1	9.80	1.15	0.90	10.14	
		5th main lhs							
0	8		Cum	1	8.00	1.15	0.90	8.28	
17.2	35	8-17.2 no drain	Cum	1	17.80	1.15	0.90	18.42	
35	50		Cum	1	15.00	1.15	0.90	15.53	
50	65		Cum	1	15.00	1.15	0.90	15.53	
65	81.4		Cum	1	16.40	1.15	0.90	16.97	
		5th main rhs							
0	18		Cum	1	18.00	1.15	0.90	18.63	
18	27.7		Cum	1	9.70	1.15	0.90	10.04	
27.7	37		Cum	1	9.30	1.15	0.90	9.63	
37	46.2		Cum	1	9.20	1.15	0.90	9.52	
46.2	55.2		Cum	1	9.00	1.15	0.90	9.32	
55.2	91.2		Cum	1	36.00	1.15	0.90	37.26	

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CIVIL Pro Sig Date PMC BANGALORE

Assistant Engineer

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
		2nd cross rhs							
0	15		Cum	1	15.00	1.15	0.90	15.53	
15	26		Cum	1	11.00	1.15	0.90	11.39	
33.7	50	26 to 33.7 no Drain	Cum	1	16.30	1.15	0.90	16.87	
50	58.7		Cum	1	8.70	1.15	0.90	9.00	
65.9	80	58.7 to 65.9 no Drain	Cum	1	14.10	1.15	0.90	14.59	
80	92.6		Cum	1	12.60	1.15	0.90	13.04	
92.6	101.5		Cum	1	8.90	1.15	0.90	9.21	
101.5	115		Cum	1	13.50	1.15	0.90	13.97	
115	129.8		Cum	1	14.80	1.15	0.90	15.32	
		2nd cross lhs							
8	15	0-8 no drain	Cum	1	7.00	1.15	0.90	7.25	
15	26		Cum	1	11.00	1.15	0.90	11.39	
40.3	50	26-40.3 no drain	Cum	1	9.70	1.15	0.90	10.04	
50	59		Cum	1	9.00	1.15	0.90	9.32	
68	80	59-68 no dsrain	Cum	1	12.00	1.15	0.90	12.42	
80	93		Cum	1	13.00	1.15	0.90	13.46	
93	105		Cum	1	12.00	1.15	0.90	12.42	
105	115		Cum	1	10.00	1.15	0.90	10.35	
115	130		Cum	1	15.00	1.15	0.90	15.53	
		2nd Main Road							
		LHS							
0	15		Cum	1	15.00	1.20	0.90	16.20	
15	30		Cum	1	15.00	1.20	0.90	16.20	
30	45		Cum	1	15.00	1.20	0.90	16.20	
45	56		Cum	1	11.00	1.20	0.90	11.88	
56	65		Cum	1	9.00	1.20	0.90	9.72	
65	75.6		Cum	1	10.60	1.20	0.90	11.45	
75.6	78.7		Cum	1	3.10	1.20	0.90	3.35	
78.7	98		Cum	1	19.30	1.20	0.90	20.84	
		RHS							
0	15		Cum	1	15.00	1.20	0.90	16.20	
15	33		Cum	1	18.00	1.20	0.90	19.44	
33	39.6		Cum	1	6.60	1.20	0.90	7.13	
39.6	44.1		Cum	1	4.50	1.20	0.90	4.86	
		Puttenhalli Cross							
0	15		Cum	1	15.00	1.00	0.90	13.50	
15	30		Cum	1	15.00	1.00	0.90	13.50	
30	45		Cum	1	15.00	1.00	0.90	13.50	
45	60		Cum	1	15.00	1.00	0.90	13.50	

C&FC

Contactor

PMC

Assistant Engineer

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
60	75		Cum	1	15.00	1.00	0.90	13.50	
		Over Burden	Cum	2	141.00	1.00	0.90	253.80	
		Culvert							
		3rd Main	Cum	1	8.30	1.50	0.90	11.21	
		3rd main	Cum	1	8.20	1.50	0.90	11.07	
		4th Main	Cum	1	7.50	1.50	0.90	10.13	
							TOTAL	1395.32	C&FC

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CIVIL Pro Sig. Date PMC BANGALORE

Assistant Engineer 11/11/2019

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET
FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
Item no.02		Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. and as per the directions of the Engineer-in-charge of the work .							
Measurements Taken On : 14/11/2019									
		New Drain							
		3rd main(RHS) Right side to 2nd							
0	14.4		Cum	1	14.40	1.10	0.15	2.38	
14.4	18.7		Cum	1	4.30	1.10	0.15	0.71	
18.7	33.7		Cum	1	15.00	1.10	0.15	2.48	
33.7	48.7		Cum	1	15.00	1.10	0.15	2.48	
48.7	63.7		Cum	1	15.00	1.10	0.15	2.48	
63.7	78.7		Cum	1	15.00	1.10	0.15	2.48	
78.7	82.9		Cum	1	4.20	1.10	0.15	0.69	
82.9	86.4		Cum	1	3.50	1.10	0.15	0.58	
86.4	92.3		Cum	1	5.90	1.10	0.15	0.97	
		3rd main (LHS)							
0	15		Cum	1	15.00	1.10	0.15	2.48	
15	30		Cum	1	15.00	1.10	0.15	2.48	
30	45		Cum	1	15.00	1.10	0.15	2.48	
45	60		Cum	1	15.00	1.10	0.15	2.48	
60	75		Cum	1	15.00	1.10	0.15	2.48	
75	81.8		Cum	1	6.80	1.10	0.15	1.12	
		3rd main (LHS) Left side to 2nd cross							
0	7.3		Cum	1	7.30	1.10	0.15	1.20	
7.3	10.3		Cum	1	3.00	1.10	0.15	0.50	
10.3	17.3		Cum	1	7.00	1.10	0.15	1.16	
17.3	20.3		Cum	1	3.00	1.10	0.15	0.50	
20.3	35		Cum	1	14.70	1.10	0.15	2.43	
35	50		Cum	1	15.00	1.10	0.15	2.48	
50	65		Cum	1	15.00	1.10	0.15	2.48	
65	78.9		Cum	1	13.90	1.10	0.15	2.29	
81	85.2		Cum	1	4.20	1.10	0.15	0.69	

Contactor

CIVIL Pro PMC BANGALORE

Assistant Engineer 14/11/2019

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET
FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
		3rd main RHS							
0	15		Cum	1	15.00	1.10	0.15	2.48	
15	30		Cum	1	15.00	1.10	0.15	2.48	
30	45		Cum	1	15.00	1.10	0.15	2.48	
45	56.7		Cum	1	11.70	1.10	0.15	1.93	
60	67.8	56.7 to 60 no Drain	Cum	1	7.80	1.10	0.15	1.29	
67.8	82.5		Cum	1	14.70	1.10	0.15	2.43	
		4th main rhs							
0	15		Cum	1	15.00	1.10	0.15	2.48	
21	23.8		Cum	1	2.80	1.10	0.15	0.46	
23.8	32.5		Cum	1	8.70	1.10	0.15	1.44	
32.5	35.8		Cum	1	3.30	1.10	0.15	0.54	
35.8	50		Cum	1	14.20	1.10	0.15	2.34	
50	57.5		Cum	1	7.50	1.10	0.15	1.24	
57.5	71.6		Cum	1	14.10	1.10	0.15	2.33	
71.6	85		Cum	1	13.40	1.10	0.15	2.21	
85	94.6		Cum	1	9.60	1.10	0.15	1.58	
		4th main lhs							
0	6.3		Cum	1	6.30	1.15	0.15	1.09	
6.3	9.2		Cum	1	2.90	1.15	0.15	0.50	
9.2	15		Cum	1	5.80	1.15	0.15	1.00	
15	24.5		Cum	1	9.50	1.15	0.15	1.64	
24.5	27.5		Cum	1	3.00	1.15	0.15	0.52	
27.5	40		Cum	1	12.50	1.15	0.15	2.16	
40	49.9		Cum	1	9.90	1.15	0.15	1.71	
49.9	56.3		Cum	1	6.40	1.15	0.15	1.10	
56.3	64.8	64.8-74.2 no drain	Cum	1	8.50	1.15	0.15	1.47	
74.2	84		Cum	1	9.80	1.15	0.15	1.69	
		5th main lhs							
0	8		Cum	1	8.00	1.15	0.15	1.38	
17.2	35	8-17.2 no drain	Cum	1	17.80	1.15	0.15	3.07	
35	50		Cum	1	15.00	1.15	0.15	2.59	
50	65		Cum	1	15.00	1.15	0.15	2.59	
65	81.4		Cum	1	16.40	1.15	0.15	2.83	
		5th main rhs							
0	18		Cum	1	18.00	1.15	0.15	3.11	
18	27.7		Cum	1	9.70	1.15	0.15	1.67	
27.7	37		Cum	1	9.30	1.15	0.15	1.60	
37	46.2		Cum	1	9.20	1.15	0.15	1.59	
46.2	55.2		Cum	1	9.00	1.15	0.15	1.55	

Contactor

CIVIL Pro Sig Dr.RMC BANGALORE

Assistant Engineer 16/11/2019

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
55.2	91.2		Cum	1	36.00	1.15	0.15	6.21	
		2nd cross rhs							
0	15		Cum	1	15.00	1.15	0.15	2.59	
15	26		Cum	1	11.00	1.15	0.15	1.90	
33.7	50	26 to 33.7 no Drain	Cum	1	16.30	1.15	0.15	2.81	
50	58.7		Cum	1	8.70	1.15	0.15	1.50	
65.9	80	58.7 to 65.9 no Drain	Cum	1	14.10	1.15	0.15	2.43	
80	92.6		Cum	1	12.60	1.15	0.15	2.17	
92.6	101.5		Cum	1	8.90	1.15	0.15	1.54	
101.5	115		Cum	1	13.50	1.15	0.15	2.33	
115	129.8		Cum	1	14.80	1.15	0.15	2.55	
		2nd cross lhs							
8	15	0-8 no drain	Cum	1	7.00	1.15	0.15	1.21	
15	26		Cum	1	11.00	1.15	0.15	1.90	
40.3	50	26-40.3 no drain	Cum	1	9.70	1.15	0.15	1.67	
50	59		Cum	1	9.00	1.15	0.15	1.55	
68	80	59-68 no dsrain	Cum	1	12.00	1.15	0.15	2.07	
80	93		Cum	1	13.00	1.15	0.15	2.24	
93	105		Cum	1	12.00	1.15	0.15	2.07	
105	115		Cum	1	10.00	1.15	0.15	1.73	
115	130		Cum	1	15.00	1.15	0.15	2.59	
		2nd Main Road							
		LHS							
0	15		Cum	1	15.00	1.20	0.15	2.70	
15	30		Cum	1	15.00	1.20	0.15	2.70	
30	45		Cum	1	15.00	1.20	0.15	2.70	
45	56		Cum	1	11.00	1.20	0.15	1.98	
56	65		Cum	1	9.00	1.20	0.15	1.62	
65	75.6		Cum	1	10.60	1.20	0.15	1.91	
75.6	78.7		Cum	1	3.10	1.20	0.15	0.56	
78.7	98		Cum	1	19.30	1.20	0.15	3.47	
		RHS							
0	15		Cum	1	15.00	1.20	0.15	2.70	
15	33		Cum	1	18.00	1.20	0.15	3.24	
33	39.6		Cum	1	6.60	1.20	0.15	1.19	
39.6	44.1		Cum	1	4.50	1.20	0.15	0.81	
		Pittenhalli Cross							
0	15		Cum	1	15.00	1.00	0.15	2.25	
15	30		Cum	1	15.00	1.00	0.15	2.25	
30	45		Cum	1	15.00	1.00	0.15	2.25	C&FC

Contactor

CIVIL Pro Sig PMC BANGALORE

Assistant Engineer 14/11/2019

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
45	60		Cum	1	15.00	1.00	0.15	2.25	
60	75		Cum	1	15.00	1.00	0.15	2.25	
		Culvert							
		3rd Main	Cum	1	8.30	1.50	0.15	1.87	
		3rd main	Cum	1	8.20	1.50	0.15	1.85	
		4th Main	Cum	1	7.50	1.50	0.15	1.69	
							TOTAL	190.37	

Contactor

PMC

Assistant Engineer 14/11/2019

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage in m		Description of Item	Unit	No	Length	Breadth	Depth	Quantity	Remarks
From	To				(m)	(m)	(m)		
Item no.04		Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.							
Measurements Taken On : 15/11/2019									
		for Drain 70 kg	Tonne	From calculation sheet				24.29	
		for Culvert 100kg	Tonne	From calculation sheet				2.82	
							TOTAL	27.11	

Contactor

CIVIL Pro Sig Date PMC BANGALORE

Assistant Engineer 15/11/2019

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

STEEL CALCULATION

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	Length	Total Length	Weight	Total weight
			mm			m	m	kg/m	Kg's
	Item no.04	**Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, paicing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.**							
	Measurements Taken On								
	Vinayaka Layout								
	3rd main(RHS) Right side to 2nd cross								
	LHS								
	Main Bars (#12@120 c/c)	1	12	763	763	2.66	2029.58	0.887814	1801.89
	Distribution(12-#8)	1	8	12	12	92.30	1107.60	0.394584	437.04
	3rd main (LHS								
	Main Bars (#12@120 c/c)	1	12	678	678	2.66	1803.48	0.887814	1601.15
	Distribution(12-#8)	1	8	12	12	81.80	981.60	0.394584	387.32
	3rd main(RHS) Right side to 2nd cross								
	LHS								
	Main Bars (#12@120 c/c)	1	12	694	694	2.60	1803.10	0.887814	1600.82
	Distribution(12-#8)	1	8	12	12	83.10	997.20	0.394584	393.48
	3rd main (LHS								
	Main Bars (#12@120 c/c)	1	12	661	661	2.56	1692.16	0.887814	1502.32
	Distribution(12-#8)	1	8	12	12	79.20	950.40	0.394584	375.01
	4th main rhs								
	RHS								
	Main Bars (#12@120 c/c)	1	12	739	739	2.60	1922.27	0.887814	1706.62
	Distribution(12-#8)	1	8	12	12	88.60	1063.20	0.394584	419.52
	LHS								
	Main Bars (#12@120 c/c)	1	12	623	623	2.40	1494.40	0.887814	1326.75
	Distribution(12-#8)	1	8	12	12	74.60	895.20	0.394584	353.23
	5th main lhs								
	Main Bars (#12@120 c/c)	1	12	603	603	2.42	1458.45	0.887814	1294.84
	Distribution(12-#8)	1	8	12	12	72.20	866.40	0.394584	341.87

CBPL

Contractor

CIVIL Pro Sig PMC BANGALORE

Assistant Engineer

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

STEEL CALCULATION

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	Length	Total Length	Weight	Total weight
			mm			m	m	kg/m	Kg's
	5th main RHS								
	Main Bars (#12@120 c/c)	1	12	761	761	2.54	1932.94	0.887814	1716.09
	Distribution(12-#8)	1	8	12	12	91.20	1094.40	0.394584	431.83
	2nd cross rhs								
	Main Bars (#12@120 c/c)	1	12	959	959	2.70	2587.95	0.887814	2297.62
	Distribution(12-#8)	1	8	12	12	114.90	1378.80	0.394584	544.05
	2nd cross LHS								
	Main Bars (#12@120 c/c)	1	12	824	824	2.60	2141.10	0.887814	1900.90
	Distribution(12-#8)	1	8	12	12	98.70	1184.40	0.394584	467.35
	2nd Main Road								
	LHS								
	Main Bars (#12@120 c/c)	1	12	818	818	2.60	2125.93	0.887814	1887.43
	Distribution(12-#8)	1	8	12	12	98.00	1176.00	0.394584	464.03
	RHS								
	Main Bars (#12@120 c/c)	1	12	369	369	2.60	958.10	0.887814	850.61
	Distribution(11-#8)	1	8	11	11	44.10	485.10	0.394584	191.41
	Culvert								
	3rd Main								
	side wall								
	Main Bars outer face (#16@150 c/c)	2	16	56	113	2.90	326.73	1.578336	515.70
	Main Bars inner face (#16@150 c/c)	2	16	56	113	2.50	281.67	1.578336	444.56
	Distribution								
	side walls(9#10)	4	10	9	36	0.80	28.80	0.616538	17.76
	bottom slab(9-#10)	2	10	9	18	1.30	23.40	0.616538	14.43
	3rd main								
	side wall								
	Main Bars outer face (#16@150 c/c)	2	16	56	111	2.90	322.87	1.578336	509.59
	Main Bars inner face (#16@150 c/c)	2	16	56	111	2.50	278.33	1.578336	439.30
	Distribution								
	side walls(9#10)	4	10	9	36	0.80	28.80	0.616538	17.76
	bottom slab(9-#10)	2	10	9	18	1.30	23.40	0.616538	14.43
	4th Main								
	side wall								
	Main Bars outer face (#16@160 c/c)	2	16	48	96	2.90	277.68	1.578336	438.26

Contractor

CIVIL Pro Sig. Date PMC BANGALORE

Assistant Engineer

Assistant Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drains at Puttenahalli Janatha colony main and cross roads and surrounding areas in Ward No. 02

PRE MEASUREMENT SHEET

FIRST AND FINAL BILL

STEEL CALCULATION

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	Length	Total Length	Weight	Total weight
			mm			m	m	kg/m	Kg's
	Main Bars inner face (#16@160 c/c)	2	16	48	96	2.50	239.38	1.578336	377.81
	Distribution								
	side walls(9#10)	4	10	9	36	0.80	28.80	0.616538	17.76
	bottom slab(9-#10)	2	10	9	18	1.30	23.40	0.616538	14.43
							TOTAL QTY IN KG'S		**27114.28**
							TOTAL QTY IN TONNE		**27.11**

C&FC

Contractor

CIVIL Pro Sig Date PMC BANGALORE

Assistant Engineer

Assistant Executive Engineer